

Application Serial No. 10/563,280
Reply to Office Action of July 10, 2008

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PATENT
Docket: CU-4631

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. – 7. (Cancelled)

8. (Currently Amended) A retardation layer, which functions as a negative C plate, comprising a cholesteric structure which is fixed in a range that its helical pitch is 1 pitch or more,

wherein in which a plurality of minute units (domains) having the cholesteric structure exist, and

further wherein a selective reflected wavelength of a selective reflected light of the cholesteric structure is shorter than a wavelength of an incident light.

9. – 26. (Cancelled)

27. (New) The retardation layer according to claim 8, wherein a maximum major axis of an inscribed ellipse on a surface of the minute units (domains) is 40 µm or less.

28. (New) The retardation layer according to claim 8, wherein the maximum major axis of the inscribed ellipse on the surface of the minute units (domains) is the same as or shorter than the wavelength of the incident light.

29. (New) The retardation layer according to claim 8, wherein an alignment defect (disclination) distance between the minute units (domains) is the same as or shorter than the wavelength of the incident light.

30. (New) The retardation layer according to claim 8, wherein a haze value, when the retardation layer is measured based on the JIS-K7105, is 2% or less.

31. (New) The retardation layer according to claim 8, wherein a maximum

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value of a leaked light measured in a range of 380 nm to 700 nm, at the time of measuring the retardation layer interposed between polarizing plates in the cross Nicol state, is 1% or less, with a premise that the leaked light at the time of measuring from a normal line direction with the polarizing plates in the cross Nicol state is 0% and the leaked light at the time of measuring from the normal line direction with the polarizing plates in the parallel state is 100%.

32. (New) The retardation layer according to claim 8, wherein a helical axis of the minute units (domains) having the cholesteric structure and the normal line to the retardation layer surface are not substantially coincident.

33. (New) The retardation layer according to claim 32, wherein an average value of an angle formed by the helical axis of the minute units (domains) having the cholesteric structure and the normal line to the retardation layer surface is substantially 0 degrees.

34. (New) The retardation layer according to claim 8, wherein a second retardation layer is further laminated on the major surface of the retardation layer.

35. (New) The retardation layer according to claim 34, wherein both of the selective reflected lights of the retardation layer and the second retardation layer have a substantially coincident selective reflected wavelength.

36. (New) The retardation layer according to claim 8, wherein the retardation layer has a molecular structure of a three dimensionally cross-linked chiral nematic liquid crystal.

37. (New) The retardation layer according to claim 8, wherein the retardation layer has a molecular state of a polymer cholesteric liquid in a glass state.

38. (New) A retardation optical element comprising a transparent base material, and the retardation layer according to claim 8 formed on the transparent base material surface.

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39. (New) The retardation optical element according to claim 38, wherein an alignment layer is formed in between the transparent base material and the retardation layer.

40. (New) The retardation optical element according to claim 38, wherein a color filter layer is formed in between the transparent base material and the retardation layer.

41. (New) A polarizing element, wherein, in the transparent base material of the retardation optical element according to claim 38, a polarizing layer is disposed on a surface on which the retardation layer is not formed.

42. (New) A liquid crystal display apparatus comprising: a liquid crystal cell; a pair of polarizing plates disposed so as to interpose the liquid crystal cell; and the retardation optical element according to claim 38 disposed in between the liquid crystal cell and at least one of the pair of the polarizing plates.